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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,820	03/30/2001	Tuyoshi Ishikawa	P20468	4491

7055 7590 03/24/2005

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RESTON, VA 20191

EXAMINER

NGUYEN, TU T

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EV

Office Action Summary	Application No. 09/820,820	Applicant(s) ISHIKAWA, TUYOSHI	
	Examiner Tu T. Nguyen	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/05/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-13 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-8 and 22 is/are allowed.
- 6) ☒ Claim(s) 9,11-13,17-21,23 and 24 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9,11-13,17-18,23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (5,048,967) in view of Kazumi (JP 06-129844).

With respect to claims 9,13, Suzuki discloses a system for detecting a pattern. The system comprises: a minute-area light source 21 (fig 5) that causes an illumination light beam to be incident on an object surface 29 (fig 5) having a pattern formed thereon as an object to be read; an objective lens 27 (fig 5) that converges a light beam carrying the information of the pattern; a spatial filter 32 (fig 5) having a shading region O2 (fig 5) that shades a portion of the light beam that forms an image (column 5, lines 40-45) of said light source from the light beam, said spatial filter shielding a specularly reflected component of the light beam (column 5, lines 36) and forming an image by the diffusely reflected component of the light beam.

Suzuki does not explicitly disclose an imaging lens. Since Suzuki discloses using a photo-detector 33 (fig 5) (column 5, lines 30-35) for taking an image of the light beam,

it would have been obvious that Suzuki's photo-detector would have to have an image lens in order to take the image of the light beam.

Suzuki does not disclose a substantially parallel illumination light beam to be incident on an object surface. Kazumi discloses an inspection device. The device comprises a substantially parallel illumination light beam 12 (fig 1) to be incident on an object surface 2 (fig 1). It would have been obvious to modify Suzuki with Kazumi to provide the substantially parallel illumination light beam 12 (fig 1) to be incident on an object surface 2 (fig 1) as taught by Kazumi for irradiating the light at a larger angle of incidence to facilitate the reading.

With respect to claims 11,17-18, it would have been obvious to adjust or modify the distance between the spatial filter and the surface of object to test different types of objects or to use the system in different environment or different system setup. The modification is in the knowledge generally available to one of ordinary skill in the art.

With respect to claim 12, Suzuki discloses that the object surface 29 (fig 5) is a reflection surface, said light source 21 (fig 5) is positioned such that the illumination light beam emitted from said light source reaches the object surface through said objective lens 27 (fig 5) and the light beam reflected at the object surface passes through said objective lens to be incident on said spatial filter 32 (fig 5).

With respect to claims 23-24, it would have been obvious to modify Suzuki with a movable imaging lens to zoom in or magnifying the detected pattern to make the system more accurate.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (5,048,967) in view of Kazumi (JP 06-129844) and Hagiwara (5,838,433).

With respect to claim 19, refer to discussion in claim 9 above for the reading system. Suzuki does not explicitly disclose the claimed filter. Hagiwara discloses using a spatial filter S1 (fig 1) having a shading region that shades a portion of the light beam that forms an image of the light source, said spatial filter being configured so that at least a central portion of the light beam is blocked by the spatial filter (abstract). It would have been obvious to modify Suzuki with the filter as taught by Hagiwara to facilitate the filtering process.

With respect to claim 20, refer to discussion in claim 9 above for a filter which filtering the specularly reflected component.

With respect to claim 21, refer to discussion in claim 11 above for the position of the filter.

Allowable Subject Matter

Claims 1,3-8,22 are allowed.

Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Prior arts of record do not disclose a spatial filter being positioned such that a size of an image of the light source formed by the objective lens is smaller than a size of the image at a paraxial image point in combination with all the limitations in claim 9.

Response to Arguments

Applicant's arguments filed 01/05/2005 have been fully considered but they are not persuasive. Applicant argues the following:

1) With respect to applicant's argument about "a spatial filter being positioned such that a size of an image of the light source formed by the objective lens is smaller than a size of the image at a paraxial image point", this argument is persuasive. Claims 1-8,22 are allowed and claim 16 is objected to.

2) With respect to applicant's argument about "a substantially parallel illumination light beam to be incident on an object surface", refer to discussion in claim 9 above.

3) With respect to applicant argument about "a particular range for the distance between the spatial filter and the surface of the objective lens", it would have been obvious to adjust the distance between the spatial filter and the surface of object to test different objects or to use the system in different environment or different system setup. The modification is in the knowledge generally available to one of ordinary skill in the art.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen
Primary Examiner
Art Unit 2877

03/19/2005